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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,040	10/27/2003	Thomas Bruce Fox	21220/04146	5737
24024 7590 05/23/2007 CALFEE HALTER & GRISWOLD, LLP 800 SUPERIOR AVENUE SUITE 1400 CLEVELAND, OH 44114			EXAMINER LEE, KYUNG S	
			ART UNIT 2832	PAPER NUMBER
			MAIL DATE 05/23/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/695,040	Applicant(s) FOX ET AL.	
	Examiner Richard K. Lee	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 3-20 and 25-27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nostrand US Pat. 6,714,393 in view of Foley US Pat. 4,167,002.

Nostrand teaches a switch system for limiting to desirable levels current and energy entering a tank of combustible liquid, the system comprising (fig. 1):

an interface circuit external (Nostrand teaches a connection with a fuel quantity measuring system for an aircraft fuel tank. Col. 2, lines 43-45) to the tank 12 and coupled through wiring P (P1 to Pn) to a switch S;

a passive transient suppression circuit TDS coupled to the wiring P and proximity to the tank, and to limit current and energy entering the tank over the wiring (col. 1, lines 63-67); and

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a control circuit 16 coupled to the switch S through the transient suppression circuit TSD and to the interface circuit, where the control circuit "monitors" the quantity of aircraft fuel determined by the status of the switch (col. 1, lines 16-20).

Regarding claim 2, "the interface circuit is rendered energized with current greater than the desirable level" is a settable level.

Regarding claims 21 and 22, Nostrand discloses a voltage limiting (col. 1, line 65).

Regarding claim 23, Nostrand teaches the switch system used in a aircraft (col. 2, line 44).

Regarding claim 24, Nostrand teaches a fuel level indicator (col. 2, line 42-44), specifically a fuel quantity measuring system.

Nostrand teaches the claimed invention except for the switch device being a float switch. Foley teaches a fuel level indicator using a float switch (please see the abstract) to show how much fuel remains aboard an aircraft (col. 1, line 55). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a well-known switch device, since selection, substitution and use of a known switch would have been obvious to one having ordinary skill in the art.

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Allowable Subject Matter

3. Claims 3-20 and 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 3 and 25 teach "the interface circuit" ... from the transient suppression circuit over wiring that is exposed to potential short duration and sustained threats; and where the transient suppression circuit is operative to maintain current and energy to the tank over the wiring to within the desirable levels notwithstanding a coupling of any one of the threats to the exposed wiring. Neither claim 3 nor 25, in combination with the claimed limitations of the base claim are disclosed or suggested by the prior art of record. Claims 4-20 and 26-27 depend on claims 3 and 35, respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard K. Lee whose telephone number is (571) 272-1994. The examiner can normally be reached on M-Tu and Th-F from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Richard K. Lee
Primary Examiner
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